

## CLAIMS

1. A gastropasty band (1) formed by a flexible strip (2) designed to be closed around the stomach of a patient by closure means (5, 6) towards the two ends (3, 4) of the strip in order to reduce the diameter of the opening of the stoma, said strip including an annular compression chamber (7) of adjustable volume connected by a catheter (9) to a device for adjusting the diameter of said chamber by injecting or withdrawing fluid, said chamber being defined by walls comprising dorsal reinforcement (12) extended by lateral walls (13), the band being characterized in that:
- the dorsal reinforcement (12) is made out of a first elastomer material having predetermined hardness  $d_1$  on the Shore A scale; and
  - the lateral walls (13) are made out of a second elastomer material of the same kind as the first material but of predetermined hardness  $d_2$  on the Shore A scale that is such that  $d_2 < d_1$ , thereby obtaining a one-piece annular chamber (7) of hardness on the Shore A scale that varies across its thickness.
2. A band according to claim 1, characterized in that the annular chamber (7) is obtained by an operation of overmolding the two elastomer materials, the lateral walls (13) being overmolded on the dorsal reinforcement (12).
3. A band according to claim 1 or claim 2, characterized in that the value of  $d_1$  lies in the range 65 to 85 on the Shore A scale, with the value of  $d_2$  lying in the range 25 to 45 on the Shore A scale.
4. A band according to claim 3, characterized in that the value of  $d_1$  is about 80 on the Shore A scale, and the value of  $d_2$  is about 30 on the Shore A scale.

5. A band according to any one of claims 1 to 4, characterized in that a portion of the closure means (5, 6) is made out of the first elastomer material.
- 5     6. A band according to claim 5, characterized in that the  
closure means (5, 6) comprise female means (5A) secured  
to one end (3) of the flexible strip (12) to co-operate  
with male means (6) secured to the other end of the  
flexible strip, the female means being formed by a ring  
10     (5A) made out of the first elastomer material.
7. A band according to any one of claims 1 to 6, characterized in that the catheter (9) includes an endpiece (10) secured to one end of the flexible strip,  
15     said endpiece being overmolded on the catheter (9).
8. A band according to claim 7, characterized in that the endpiece (10) is made out of the first material.
- 20     9. A band according to any one of claims 1 to 8, characterized in that the closure means (4, 5) are secured to the end (3, 4) of the flexible strip (2) and extend outwards from the strip from the dorsal reinforcement (12), the annular chamber (7) being  
25     terminated by two transverse sections (15, 16) that are substantially plane so as to bear against each other in the closed position of the band, thereby forming an annular compression chamber (7) providing compression over the entire periphery of the band.
- 30     10. A band according to any one of claims 1 to 9, characterized in that the annular chamber (7) presents a cross-section that is substantially elliptical in shape.
- 35     11. A band according to any one of claims 1 to 10, characterized in that it presents shape memory that is substantially circular.

12. A band according to any one of claims 1 to 11,  
characterized in that the dorsal reinforcement (12)  
presents a shape that is substantially of channel  
5 section.

13. A band according to claim 12, characterized in that  
the web (12B) of the dorsal reinforcement (12) is of  
thickness greater than the thickness of its flanges  
10 (12B).

14. A method of fabricating a gastroplasty band by  
injecting an elastomer material in a mold provided with  
at least one cavity having at least one core, the method  
15 being characterized by the steps of;

a) injecting a first elastomer material of  
predetermined hardness  $d_1$  on the Shore A scale in order to  
make at least the dorsal reinforcement of the band; and  
b) overmolding at least on the dorsal reinforcement  
20 by injecting a second elastomer material of the same kind  
as the first material but of predetermined hardness  $d_2$  on  
the Shore A scale such that  $d_2 < d_1$ , in order to make the  
remaining portions of the band and obtain an overmolded  
one-piece band of varying hardness.

25 15. A method according to claim 14, characterized in that  
during step a), a portion of the closure means of the  
band is also made out of the first elastomer material.

30 16. A method according to claim 14 or claim 15,  
characterized in that a catheter endpiece is also made  
out of the second elastomer material.

17. A method according to claim 14, characterized in  
35 that:

- during step a), the first elastomer material is injected into a dorsal cavity having a dorsal reinforcement core placed therein;

- thereafter the dorsal reinforcement core supporting the dorsal reinforcement is withdrawn and placed in a band recess;

- and then step b) is performed to obtain the final band.

10 18. A method according to claims 15 and 17, characterized in that:

- during step a), a portion of the band fixing means is made by injecting the first material in a cavity for ring-shaped fixing means having a ring core placed therein;

- then prior to step b), the ring core supporting the ring is withdrawn and placed in the band cavity together with the dorsal reinforcing core or that is to receive said dorsal reinforcing core.

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19. A method according to claims 16 and 18, characterized in that:

- during step b), the endpiece is made by injecting the second material into a catheter cavity including a catheter;

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- then the catheter supporting the endpiece is removed and said endpiece is assembled, e.g. by adhesive, with the final band obtained at the end of step b).